

LSD37

Engine Room

Hot & Cold Checks/Tests

INSTALLED FIREFIGHTING EQUIPMENT

	LOA		IA	
	Fwd	Aft	Fwd	Aft
Halon MRC S-10 demonstration				
Halon MRC 18M-3R demonstration				
Halon bottle cal stickers, pressure, piping/nozzle integrity				
Halon actuation station integrity				
AFFF system operational test				
AFFF hosereel/nozzle operation				
Refractometer test (MIP 5551)				
Valve alignment/labeling				
Concentrate level in tank				
Space cutouts locked open				
AFFF hosereel activation stations				
Ellison door closure/Escapes trunk lighting and integrity				

Main Engine

	LOA		IA	
	NR 1 ME	NR 2 ME	NR 1 ME	NR 2 ME
Three point check				
Lube Oil sump level indicator				
Low Lube Oil Pressure Alarm				
Standby/Emergency LO Pump auto-start				
LO Pump Sequencing				
Unloader operation				
Operation of turning gear and shaft locking device				
Guarding valve remote operation				
Cycle ahead and astern throttle through full travel				
Wrong direction alarm				
EOT and ROT transmitter operation				
Operation of gland exhaust fan				
Shift, Inspect, and Clean Lube Oil Strainer (verify strainer basket integrity; vent valve, drain valve, equalizing valve operation; plug cock leakage; shafting interlock; differential pressure)				
Spray shield integrity				
Gland seal regulator in parameter				
Vent fog precipitator operation				

MAIN CIRCULATING WATER SYSTEM

	LOA		IA	
	NR1	NR2	NR1	NR2
Sea valve automatic/remote operation				
Emergency bilge suction valve operation				
Pump SLG for freedom of movement				
Pump SLG operation				

X= Check required for exam type

O = Observe during assessment

SHIP'S SERVICE TURBINE GENERATOR

	LOA		IA	
	1A	1B	1A	1B
Manual Trip				
Low LO Trip				
Backpressure Trip				
Low LO alarm				
Operation of elect LO pump and manual LO pump				
Sample lube oil, sump level, dipstick				
Rotor position, bearing temps, oil flow through SFIs				
Vent fog precipitator operation				
Alarm panel				
Gland seal operation				
Operation of Aux Circ Pump and Aux Cond Pump				
Shift, Inspect, and Clean Lube Oil Strainer. (Lube oil strainer spray shield integrity, plug cock leakage, differential pressure, interlocks.)				
Airbox telltale drains, temp alarms				
Overspeed Trip (manual trip must be demonstrated first)				
Reverse power relay trip operation				
Governor high and low speed stops (generator not overspeed before reaching the high speed stop)				
	2A	2B	2A	2B
Manual Trip				
Low LO Trip				
Backpressure Trip				
Low LO alarm				
Operation of elect LO pump and manual LO pump				
Sample lube oil, sump level, dipstick				
Rotor position, bearing temps, oil flow through SFIs				
Vent fog precipitator operation				
Alarm panel				
Gland seal operation				
Operation of Aux Circ Pump and Aux Cond Pump				
Shift, Inspect, and Clean Lube Oil Strainer. (Lube oil strainer spray shield integrity, plug cock leakage, differential pressure, interlocks.)				
Airbox telltale drains, temp alarms				
Overspeed Trip (manual trip must be demonstrated first)				
Reverse power relay trip operation				
Governor high and low speed stops (generator not overspeed before reaching the high speed stop)				

AUXILIARY TURBINE DRIVEN EQUIPMENT

	LOA		IA	
	NR1 SLOP	NR2 SLOP	NR1 SLOP	NR2 SLOP
SLG freedom of movement				
Position of overload nozzle				
Turn pump by hand				
SLOP idle set point				
SLG at set point				
Constant speed governor proper operation				
Manual/emergency trip valve operation				
Low LO pressure trip restart feature				
Pump running in parameters				

MAIN SHAFTING

	LOA		IA	
	PORT	STBD	PORT	STBD
Stern tube flushing and cooling water supply, filtering system, and leak-by.				
Inflatable seal air/CO2 supply				
Inflatable boot operation				
Shaft coupling guards, slip ring and brush rigging condition, bulkhead seals				
Line shaft bearing sump level, dip-stick, oiler ring inspection, security seals, labels (IC, BC, date), lube oil sample				

MAIN CONDENSATE PUMPS

	LOA		IA	
	1A	1B	1A	1B
Run direction of rotation				
Start/stop controller function				
	2A	2B	2A	2B
Run direction of rotation				
Start/stop controller function				

MAIN SWITCHBOARDS & DISTRIBUTION PANELS

	LOA		IA	
	NR1	NR2	NR1	NR2
Ground Check				

AUTOMATIC / MANUAL BUS TRANSFERS

	LOA		IA	
	FWD	AFT	FWD	AFT
ABT operation in both automatic and manual modes				
Shift MBT, check manual interlock (both sources available)				

SALINITY ALARM PANELS

	LOA		IA	
	FWD	AFT	FWD	AFT
Salinity panel meter calibration test				
Salinity panel alarm set points				
Evaporator automatic dump valve set point				
Alarm panel silent alarm test				
Alarm panel circuit failure test				

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FRESH WATER DRAIN COLLECTION TANK	LOA		IA	
	FWD	AFT	FWD	AFT
Vacuum drag piping				
Tank level controls when on vacuum drag				

ELECTRIC FIRE PUMPS	LOA		IA	
	NR3	NR4	NR3	NR4
Electric pump local & remote start/stop				
Suction/discharge valve local/remote operation				
Check-valve pack leakage (no backwards pump rotation)				
	NR6	NR7	NR6	NR7
Electric pump local & remote start/stop				
Suction/discharge valve local/remote operation				
Check-valve pack leakage (no backwards pump rotation)				

STEAM DRIVEN FIRE PUMPS	IA			
	NR 2	NR 5		
CPR proper operation				
Suction/discharge valve local/remote operation				
Check-valve pack leakage (no backwards pump rotation)				

MAIN DRAINAGE SYSTEM	LOA		IA	
	FWD	AFT	FWD	AFT
Align and operate eductor				
Eductor capable of drawing vacuum IAW EOSS				
Bilge suction strainers				
Cycle main drains at local and remote stations (all)				

LOW PRESSURE AIR SYSTEMS	LOA		IA	
	NR 1	NR 2	NR 1	NR 2
Compressor auto-start load/unload				
Low LO shut-down				
Low LO time-delay				
Compressor shut-down (high temp shut-down can be checked by removing the stage cannon plug)				
Low control air alarm				
Compressor lead/lag settings				

AIR PILOT/DIAPHRAGM OPERATED VALVES	LOA		IA	
	FWD	AFT	FWD	AFT
Manually stroke, check for binding				

VENTILATION

	LOA		IA	
	FWD	AFT	FWD	AFT
Indicator lights				
Start/stop and high/low from local station				
Start/stop and high/low from remote station				

DISTILLING PLANT

	LOA		IA	
	NR 1	NR 2	NR 1	NR 2
All pumps operating correctly				
Dump valve set point/automatic function				
Operating in parameters (temp/press/salinity)				

AUXILIARY MACHINERY COOLING WATER

	LOA		IA	
	FWD	AFT	FWD	AFT
AMCW Pump direction of rotation/output pressure				
AMCW Pump local/remote start/stop controller function				
Emergency reducer on line, able to maintain set-point				

LSD37

Fire Room Hot & Cold Checks/Tests

BOILER BURNER FRONT

	IA		IA	
	NR 1	NR 2	NR 1	NR 2
Quick closing valves at local and remote				
Burner root valve/SSD/ball check leakage				
Three-way valve operation and marking				
FO control valve/micrometer valve proper				
Air register freedom of movement				
Steam smothering system alignment				
Air casing lighting				
Steam atomization temperature				
Periscope lighting and alignment				
Sufficient number of burner barrels and				
Sample cooler preservation, operability,				
Soot blower element rotation/freedom of				
Main/Aux steam stops cycle locally/remotely				
Safety valve yoke clearance, lifting fork				
Pri/Sec RWLI tracking high/low water				
Boiler gage glass isolation valves &				
Sliding foot freedom of movement				
Test BID ac/dc power supply and operation,				
Bottom blow valve fasteners, orifice caps				

FUEL OIL SERVICE SYSTEM

	LOA			IA		
	NR 1A	NR 1B	NR 1E	NR 1A	NR 1B	NR 1E
Electric FO pump local/remote shutdown						
Electric FO pump discharge unloader						
Steam FOSP steam trip remote/local						
Clean Helan strainer						
	NR 2A	NR 2B	NR 2E	NR 2A	NR 2B	NR 2E
Electric FO pump local/remote shutdown						
Electric FO pump discharge unloader						
Steam FOSP steam trip remote/local						
Clean Helan strainer						

MAIN FEED PUMPS

	LOA			IA		
	NR 1A	NR 1B	NR 1E	NR 1A	NR 1B	NR 1E
MFP low suction trip	O	X		O	X	
MFP constant pressure regulator	O	X		O	X	
Emergency feed pump able to support boiler			X			X
	NR 2A	NR 2B	NR 2E	NR 2A	NR 2B	NR 2E
MFP low suction trip	O	X		O	X	
MFP constant pressure regulator	O	X		O	X	
Emergency feed pump able to support boiler			X			X

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MAIN FEED BOOSTER PUMPS

	LOA		IA	
	NR 1A	NR 1B	NR 1A	NR 1B
MFBP low discharge pressure alarm				
MFBP auto-start				
MFBP operating within normal parameters				
	NR 2A	NR 2B	NR 2A	NR 2B
MFBP low discharge pressure alarm				
MFBP auto-start				
MFBP operating within normal parameters				

ELECTRIC FORCED DRAFT BLOWERS

	LOA		IA	
	NR 1	NR 2	NR 1	NR 2
Electric light-off blower operation/shutter				

FORCED DRAFT BLOWERS

	LOA		IA	
	NR 1A	NR 1B	NR 1A	NR 1B
Shutter freedom of movement, capability to				
Manual LO pump operation				
LO system low pressure alarm				
LO system low pressure trip				
FDB minimum speed set point				
FDB SLG operation				
	NR 2A	NR 2B	NR 2A	NR 2B
Shutter freedom of movement, capability to				
Manual LO pump operation				
LO system low pressure alarm				
LO system low pressure trip				
FDB minimum speed set point				
FDB SLG operation				

AUTOMATIC BOILER CONTROLS

	LOA		IA	
	NR 1	NR 2	NR 1	NR 2
(OLV/ABC not installed on LPD/AGF)				
Operation/tracking of all final control				
Operation of master/element air locks,				
All control element fail positions correct				
Minimum signal selector (up ramp, FO				
FW control stability in automatic				

DEAERATING FEED TANK

	LOA		IA	
	NR 1	NR 2	NR 1	NR 2
Operability of the MUF and dump valves				
Upper/lower shell temperatures in				
D.O. test satisfactory, less than 15 ppb				
Aux exhaust system valve sequencing				

SALINITY ALARM PANELS	LOA		IA	
	FWD	AFT	FWD	AFT
Salinity panel meter calibration test				
Salinity panel alarm set points				
Alarm panel silent alarm test				
Alarm panel circuit failure test				

FIRE ROOM REMOTE OPERATORS	LOA		IA	
	FWD	AFT	FWD	AFT
Cycle boiler stops at local and remote				
Cycle FO cut-outs at local and remote				

MAIN DRAINAGE SYSTEM	LOA		IA	
	FWD	AFT	FWD	AFT
Align and operate eductor				
Cycle main drains at local and remote				

AIR PILOT/DIAPHRAGM OPERATED VALVES	LOA		IA	
	FWD	AFT	FWD	AFT
Manually stroke, check for binding				

FUEL OIL TRANSFER SYSTEM	LOA		IA	
	FWD	AFT	FWD	AFT
FOTP operation/demonstrate FO transfer				

BILGE & STRIPPING SYSTEM	LOA		IA	
	FWD	AFT	FWD	AFT
Align and perform token stripping of FO				
Align and perform token pumping of bilge				

OIL LAB	LOA		IA	
	FWD	AFT	FWD	AFT
Conduct a thief sample on fuel oil service				
Conduct dissolved Oxygen test on DFT.				
Conduct Hydrazine test on DFT.				
Sample and test Boiler.				

LSD37

Auxiliaries Hot & Cold Checks/Test

INSTALLED FIREFIGHTING EQUIPMENT	LOA		IA	
	FWD EDG	AFT EDG	FWD EDG	AFT EDG
Halon MRC S-10 demonstration				
Halon MRC 18M-3R demonstration				
Halon bottle cali stickers, pressure,				
Halon actuation station integrity				
AFFF system operational test				
AFFF hosereel/nozzle operation				
Space cutouts locked open				
AFFF hosereel activation stations				

EMERGENCY GENERATOR & SWITCHBOARD	LOA		IA	
	FWD EDG	AFT EDG	FWD EDG	AFT EDG
Check condition of batteries				
Check batteries specific gravity				
Generator "drop test", ability to assume load				
Generator manual trip				
Generator overspeed trip				
Generator low lube oil alarm/trip				
Generator remote shutdown device				
Generator JW high temp alarm				
Generator JW expansion tank low level alarm				
Generator Barring device interlock				
Generator Pre-lube pump operation				
SICLOS lube oil strainer				
Obtain and test jacket water sample				
Obtain and test lube oil fir dilution/acidity				
Generator Pedestal bearing high temp alarm				
Generator space CO2 flooding				
Generator salt water circ pump operation				
Generator emergency salt water reducing				
Check emergency switchboard for grounds				
Generator day tank level				
Space ABT operation				
Generator operating at normal temperatures &				

MAIN DRAINAGE SYSTEM	LOA		IA	
	FWD EDG	AFT EDG	FWD EDG	AFT EDG
Align and operate eductor				
Cycle main drains at local and remote stations				

FUEL OIL TRANSFER SYSTEM	LOA		IA	
	FWD EDG	AFT EDG	FWD EDG	AFT EDG
FOTP operation/demonstrate FO transfer				

ELECTRIC FIRE PUMPS	LOA	IA
	NR 1	NR 1
Electric pump local & remote start/stop		
Pump auto-start capability		
Suction/discharge valve local/remote operation		
Check-valve pack leakage (no backwards		

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